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ABSTRACT

Background-foreground segmentation is performed as a maximum likelihood classification. During a training procedure, a system estimates the parameters of likelihood probability models, which are the probability of observing images assuming that the images come from the background scene. During normal operation, the likelihood probability of captured images is estimated using the background models. The background-foreground the likelihood is carried out by comparing segmentation probabilities of the test images with fixed thresholds. probability of observing foreground objects is assumed constant, as foreground images are generally not modeled. This value, the probability threshold, preferably represents a tunable parameter Pixels with low likelihood probability of of the system. belonging to the background scene are classified as foreground, while the rest are labeled as background.